LISTING OF THE CLAIMS:

1. (Currently Amended) An opto-electronic package facilitating the passive alignment of VCSELs to waveguides; said package comprising:

a ~~core~~ substrate bearing a first surface;

a first cladding layer positioned on said first surface of said ~~core~~ substrate;

a contact pad positioned on at least a position of the surface of said first cladding layer;

a second cladding layer located on a further surface position of said first cladding layer;

a waveguide channel being positioned in said second cladding layer; ~~and~~

optical means being in optical communication with said waveguide channel in said second cladding layer and in electrical connection with said contact pad on said first cladding layer, [.] at least one transmitter/receiver chip being coupled to said surface of said second cladding layer; and

at least one transmitter/receiver chip being coupled to said surface of said second cladding layer through the interposition of C4-joints.

2. (Currently Amended) An opto-electronic package as claimed in ~~Claim~~ claim 1, wherein said first and second cladding layers are each comprised of an organic material.

Claims 3 and 4 (Cancelled).

5. (Currently Amended) An opto-electronic package as claimed in ~~Claim 4~~ claim 1, wherein said ~~core~~ substrate comprises a low expansion material approaching the coefficient of thermal expansion of the at least one chip so as to reduce and minimize strains encountered in the C-4 joints.

6. (Currently Amended) An opto-electronic package as claimed in ~~Claim~~ claim 5, wherein said ~~core~~ substrate material is selected from the group of materials consisting of epoxy glass composites, utilizing thick yarns and low expansion s-glass with a CTE of as low as 10 ppm/°C.

7. (Currently Amended) An opto-electronic package as claimed in ~~Claim~~ claim 5, wherein an index-matched adhesive couples said second cladding layer directly to said at least one transmitter/receiver chip, and extends between said optical means and waveguide channel.

8. (Currently Amended) An opto-electronic package as claimed in ~~Claim~~ claim 1, wherein said second cladding layer has an integrated chip with optical inputs and outputs mounted on the surface of said cladding layer.

9. (Currently Amended) An opto-electronic package as claimed in ~~Claim~~ claim 1, wherein said package comprises a constituent of a printed circuit board providing for the precise alignment of VCSELs to waveguides.

10. (Currently Amended) An opto-electronic package as claimed in ~~Claim~~ claim 1, wherein said package comprises a constituent of an opto-electronic card providing for the passive alignment of VCSELs to waveguides.

11. (Currently Amended) A method of producing an opto-electronic package facilitating the passive alignment of VCSELs to waveguides; said method comprising:

providing a ~~core~~ substrate having a first surface;

positioning a first cladding layer on said first surface of said ~~core~~ substrate;

arranging a contact pad on at least a portion of the surface of said first cladding layer;

locating a second cladding layer on a further surface portion of said first cladding layer;

positioning a waveguide channel in said second cladding layer; ~~and~~

providing optical means in optical communication with said waveguide channel in said second cladding layer and in electrical connection with said contact pad on said first cladding layer, [.] at least one transmitter/receiver chip being coupled to said surface of said second cladding layer; and

at least one transmitter/receiver chip is coupled to said surface of said second cladding layer through the interposition of C4-joints.

12. (Currently Amended) A method as claimed in ~~Claim~~ claim 11, wherein said first and second cladding layers are each comprised of an organic material.

Claim 13 and 14 (Cancelled).

15. (Currently Amended) A method as claimed in ~~Claim 14~~ claim 11, wherein said ~~core~~ substrate comprises a low expansion material approaching the coefficient of thermal expansion of the at least one chip so as to reduce and minimize strains encountered in the C4 joints.

16. (Currently Amended) A method as claimed in ~~Claim~~ claim 15, wherein said core material is selected from the group of materials consisting of epoxy glass composites, utilizing thick yarns and low expansion S-glass with a CTE of as low as 10 ppm/°C.

17. (Currently Amended) A method as claimed in ~~Claim~~ claim 15, wherein an index-matched adhesive couples said second cladding layer directly to said at least one transmitter/receiver chip, and extends between said optical means and waveguide channel.

18. (Currently Amended) A method as claimed in ~~Claim~~ claim 11, wherein an integrated chip with optical inputs and outputs is mounted on the surface of said second cladding layer.

19. (Currently Amended) A method as claimed in ~~Claim~~ claim 11, wherein said package comprises a constituent of a printed circuit board providing for the precise alignment of VCSELs to waveguides.

20. (Currently Amended) A method as claimed in ~~Claim~~ claim 11, wherein said package comprises a constituent of an opto-electronic card providing for the passive alignment of VCSELs to waveguides.

21. (Withdrawn) An opto-electronic package for alignment of a VCSEL to a waveguide, said package comprising:

a first dielectric layer;

a first signal conductor on said first dielectric layer;

a second dielectric layer overlying said first signal conductor and exposed portions of said first dielectric layer;

an optical waveguide within and parallel to said second dielectric layer;

a third dielectric layer on said second dielectric layer for mounting an optical device; and wherein:

there is an opening through said third dielectric layer to permit an optical path between said optical device and said waveguide; and

there is an opening through said second and third dielectric layers to permit an electrical connection of said optical device to said first signal conductor.

22. (Withdrawn) An opto-electronic package, as set forth in Claim 1, wherein said third dielectric layer includes pads for solder balls to mount said optical device.

23. (Withdrawn) An opto-electronic package, as set forth in Claim 1, wherein said first signal conductor includes a pad for a solder ball to mount said optical device.